

REMARKS

Claims 1, 4 and 5 are pending in this application. Claims 1 and 4 have been amended. Care has been exercised to avoid the introduction of new matter. Indeed, adequate descriptive support for the present Amendment should be apparent throughout the originally filed disclosure as, for example, Table 2 appearing at page 20 of the written descriptive of the specification, noting sample nos. 1-21. Applicants submit that the present Amendment does not generate any new matter issue.

Claims 1, 4, and 5 were rejected under the second paragraph of 35 U.S.C. § 112.

In the statement of the rejection the Examiner asserted that the expressions reduced warp” and “reduced increment in warp” in claim 1 are relative terms which render the claimed invention indefinite. This rejection is traversed.

Applicants do not agree with the Examiner’s conclusion that claims are indefinite because of the recitation of relative terminology for the reasons of record, noting that consistent judicial precedent holds that **reasonable precision** in light of the particular subject matter involved is all that is required by the second paragraph of 35 U.S.C. § 112. *Zoltek Corp. v. United States*, 48 Fed. Cl. 240, 57 USPQ2d 1257 (Fed. Cl. 2000); *Miles Laboratories, Inc. v. Shandon, Inc.*, 997 F.2d 870, 27 USPQ2d 1123 (Fed. Cir. 1993); *North American Vaccine, Inc., v. American Cyanamid Co.*, 7 F.3d 1571, 28 USPQ2d 1333 (Fed. Cir. 1993); *U.S. v. Teletronics Inc.*, 857 F.2d 778, 8 USPQ2d 1217 (Fed. Cir. 1988); *Hybritech, Inc. v. Monoclonal Antibodies, Inc.*, 802 F.2d 1367, 231 USPQ (Fed. Cir. 1986). Applicants would particularly note that the use of relative expressions has been sanctioned in numerous judicial decisions. See, for example, *Andrew Corp. v. Gabriel Electronics, Inc.*, 847 F.2d 819, 6 USPQ2d 2010 (Fed. Cir. 1988).

At any rate, in order to expedite prosecution, claim 1 has been amended by deleting the expressions the Examiner considered relative. A limitation as to the maximum increment warp after a single heat treatment has been specified consistent with sample nos. 1 through 21, tested and reported at Table 2 on page 20 of the written description of the specification. Clearly, one having ordinary skill in the art could not possibly be confused as to the scope of the claimed invention, particularly when reasonably interpreted in light of and consistent with the written description of the specification, which is the judicial standard. *Miles Laboratories, Inc. v. Shandon, Inc., supra.*

Applicants, therefore, submit that the imposed rejection of claims 1, 4 and 5 under the second paragraph of 35 U.S.C. § 112 is not legally viable and, hence, solicit withdrawal thereof.

Claims 1, 4 and 5 were rejected under 35 U.S.C. § 102 for lack of novelty or, alternatively, under 35 U.S.C. § 103 for obviousness predicated upon Harris '261, Chiao, Yasumoto et al., Sugiura et al. and JP '265, each considered alone.

Claims 1, 4 and 5 were rejected under 35 U.S.C. § 102 for lack of novelty or, alternatively, under 35 U.S.C. § 103 for obviousness predicated upon Harris '377.

Each of the above rejections is traversed.

Independent claim 1 now specifies that the claimed aluminum nitride ceramic base material has an increment in warp after a single heat treatment of not more than 2.0×10^{-2} $\mu\text{m}/\text{mn}$.

It is **not** disputed on this record that **none** of the applied references, taken singly or in combination, recognize let alone address the **problem** of increment in warp after heat treatment, much less even hint that it is related in any way to the **uniformity of sintering agents (a/b) as**

specifically recited in claim 1. This being the case, it must follow **none** of the applied references, taken singly or in combination, hint at solving the warpage problem by uniformly distributing sintering agents throughout a sintered ceramic base material, let alone by employing a porous setter, as in the claimed invention. Clearly, there is no factual basis upon which to predicate the determination that any of the applied references inherently, i.e., **necessarily**, discloses or suggests the claimed invention. Rejections predicated upon inherency cannot rely on **uncertainties or happenstance**. *Crown Operations International Ltd. v. Solutia Inc.*, 289 F.3d 1367, 62 USPQ2d 1917 (Fed. Cir. 2002); *Finnegan Corp. v. ITC*, 180 F.3d 1354, 51 USPQ2d 1001 (Fed. Cir. 1999); *In re Robertson*, 169 F.3d 743, 49 USPQ2d 1949 (Fed. Cir. 1999); *Electro Medical Systems S.A. v. Cooper Life Sciences, Inc.*, 34 F.3d 1048, 32 USPQ2d 1017 (Fed. Cir. 1994).

Based upon the foregoing, Applicant submit that a prima facie basis to deny patentability to the claimed invention under 35 U.S.C. §102 or 35 U.S.C. §103 has not been established. Further, the objective evidence of nonobviousness of record, notably the data in Table 2, evince the nonobviousness of the now claimed subject matter having a specific maximum increment in warp.

Evidence in the specification.

Adverting to Table 2 on page 20 of the written description of the specification, each and every sample in accordance with the present invention having a uniformity of sintering agents a/b less than or equal to 1.3, as specifically recited in claim 1, exhibited an increment and warp after a single heat treatment of no greater than 2.0×10^{-2} um/mn. However, comparative examples 22 through 25 exhibited an increment in warp greater than that specified in claim 1,

and these samples had a ratio a/b greater than 1.3. While comparative examples 28 and 29 had a low increment in warp, the samples exhibited totally unsatisfactory warp after sintering.

The data clearly establish that the reduced increment in warp after heat treatment, as specified in independent claim 1, does not just happen by chance, as evidenced by comparative example 22, 23, 24 and 25. Neither does the advantageously low warp after sintering. Rather, Applicants discovered that the reduced increment in warp after heat treating and as well as warp after sintering are linked to the uniformity of sintering agents as specified in independent claim 1. **Thus, Applicants have specified not only the ratio a/b but also have quantified the maximum in warp after heat treatment linked to the uniformity of sintering agents.** As previously pointed out, the increment in warp after heat treatment is not a problem recognized by the any of the applied references. Neither is the significance of the uniformity of sintering agents. Clearly, none of the applied references recognized the **nexus** between the uniformity of sintering agents and increment in warp. The possibility that one having ordinary skill in the art might **stumble** into the claimed invention is not a basis for defeating the patentability of the claimed invention. *W. L. Gore & Associates, Inc. v. Garlock, Inc.*, 721 F.2d 1540, 220 USPQ 303 (Fed. Cir. 1983); *In re Oelrich*, 666 F.2d 578, 212 USPQ 323 (CCPA 1981). The prior art simply does not put the claimed invention into the knowing possession of the public. *In re Paulsen*, 30 F.3d 1475, 31 USPQ2d 167 (Fed. Cir. 1994).

Applicants, therefore, submit that the imposed rejection of claims 1, 4 and 5 under 35 U.S.C. § 102 for lack of novelty or, alternatively, under 35 U.S.C. § 103 for obviousness predicated upon Harris '261, Chiao, Yasumoto et al., Sugiura et al. and JP '265, and the imposed rejection of claims 1, 4 and 5 under 35 U.S.C. § 102 for lack of novelty, or alternatively, under

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35 U.S.C. § 103 for obviousness predicated upon Harris '377, are not factually or legally viable and, hence, solicit withdrawal thereof.

Based upon the foregoing it should be apparent that the imposed rejections have been overcome and that all pending claims are in condition for immediate allowance. Favorable consideration is, therefore, respectfully solicited.

To the extent necessary, a petition for an extension of time under 37 C.F.R. 1.136 is hereby made. Please charge any shortage in fees due in connection with the filing of this paper, including extension of time fees, to Deposit Account 500417 and please credit any excess fees to such deposit account.

Respectfully submitted,

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